



May 22, 2021

Mr. Austin F. Callwood, Director
Division of Environmental Protection
Department of Planning & Natural Resources
45 Mars Hill
Frederiksted, V.I. 00840-4474

SUBJECT: East Incinerator Opacity (May 16, 2021) and SO₂ 12-Hr Exceedance (May 17-19, 2021)

Dear Mr. Callwood:

This letter is submitted in compliance with Condition No. 2.4.5.1 of Limetree Bay Title V permit as a follow-up to the email notifications to Ms. Verline Marcellin of the Division of Environmental Protection on May 16, 2021 at 7:14 PM and May 17, 2021 at 7:03 AM regarding an opacity event and a 12-hr rolling average SO₂ exceedance at the east incinerator (H-4745).

The Continuous Emissions Monitoring System (CEMS) at the east incinerator recorded SO₂ concentrations in excess of 250 ppm based on a 12-hr rolling average (ref. 40 CFR 60.102a(f)(1)(i)) on May 17, 2021.

The following table provides the 12-hr SO₂ concentrations at the east incinerator during the exceedance event.

Source Parameter Unit	EINCIN SO ₂ PPMC (PPMC)	Source Parameter Unit	EINCIN SO ₂ PPMC (PPMC)	Source Parameter Unit	EINCIN SO ₂ PPMC (PPMC)
05/17/21 05:00	142.2	05/17/21 22:00	593.8	05/18/21 15:00	593.8
05/17/21 06:00	593.8	05/17/21 23:00	593.8	05/18/21 16:00	593.8
05/17/21 07:00	593.8	05/18/21 00:00	593.8	05/18/21 17:00	593.8
05/17/21 08:00	593.8	05/18/21 01:00	593.8	05/18/21 18:00	593.8
05/17/21 09:00	593.8	05/18/21 02:00	593.8	05/18/21 19:00	593.8
05/17/21 10:00	593.8	05/18/21 03:00	593.8	05/18/21 20:00	601.4
05/17/21 11:00	593.8	05/18/21 04:00	593.8	05/18/21 21:00	608.5
05/17/21 12:00	593.8	05/18/21 05:00	593.8	05/18/21 22:00	614.1
05/17/21 13:00	593.8	05/18/21 06:00	593.8	05/18/21 23:00	619.0
05/17/21 14:00	593.8	05/18/21 07:00	593.8	05/19/21 00:00	616.9
05/17/21 15:00	593.8	05/18/21 08:00	593.8	05/19/21 01:00	615.5
05/17/21 16:00	593.8	05/18/21 09:00	593.8	05/19/21 02:00	613.2
05/17/21 17:00	593.8	05/18/21 10:00	593.8	05/19/21 03:00	610.3
05/17/21 18:00	593.8	05/18/21 11:00	593.8	05/19/21 04:00	603.3
05/17/21 19:00	593.8	05/18/21 12:00	593.8	05/19/21 05:00	598.1
05/17/21 20:00	593.8	05/18/21 13:00	593.8	05/19/21 06:00	595.0
05/17/21 21:00	593.8	05/18/21 14:00	593.8	05/19/21 07:00	143.9
				05/19/21 08:00	136.3

Additionally, an opacity was observed on May 16, 2021 at approximately 4:40 PM from the east incinerator and lasted until 5:05 PM. Opacity shall be less than 20% (ref. Title V permit condition 3.1.2.6.2).



On May 16, 2021 at approximately 4:38 PM, the No. 4 Sulfur Recovery Unit (SRU4) tripped on high unit backpressure, resulting in the tail gas swinging from the Tail Gas Treating Unit (TGTU) to the East Incinerator. An opacity occurred from 4:40 PM to 5:05 PM due to the sudden change in composition of the gas. At 5:15 pm the SRU4 burner was relit and catalyst temperatures normalized for H₂S removal.

On May 17th at approximately 6:00 AM high back pressure again (12 psig) caused the automatic Safety Interlock (No. 559) to be triggered and the valve to the TGTU was closed and the valve for the TGTU bypass to the east incinerator was opened. H₂S was combusted in the incinerator producing SO₂. SRU3 was already shutdown due to the Coker incident on 5/12/21. The event lasted until May 19th at 7:00 AM when Amine 7 unit was shutdown and no more H₂S was entering the SRU. The investigation is not completed at this time, but corrective actions will include to ensure that both SRUs run in parallel and co-fire propane continuously. One SRU should receive acid gas while the other "lag" unit is on hot standby, permitting streaming within minutes if the lead SRU trips. SRU operating procedures will be reviewed and revised if necessary.

If you have any questions or need additional information, please contact Steve Maltby at [REDACTED]

Sincerely,

Neil Morgan
VP and General Manager
Limetree Bay Refining, LLC

Electronic Copy: Verline Marcellin (DPNR)
Robert Buettner (EPA)
Patrick Foley (EPA)
Harish Patel (EPA)